

A NEW SPECIES OF *PRIONUS* (*HOMAESTHESIS*) FROM THE MONAHANS SANDHILLS OF WESTERN TEXAS (COLEOPTERA: CERAMBYCIDAE)^{1,2}

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ABSTRACT: *Prionus* (*Homaesthesis*) *spinipennis* is described as new from the Monahans Sandhills of western Texas. Comparisons are given for related and sympatric species, and the taxonomic parameters of the subgenus are re-examined. A key to species of *Homaesthesis* is provided.

Prionus (*Homaesthesis*) *arenarius* Hovore, described (1981) from Monahans Sandhills State Park in western Texas, is one of several *Homaesthesis* species associated with sand dune habitats. During a visit to the Monahans dune system in August, 1982, R.H. Turnbow, Jr., and T.P. Friedlander collected yet another undescribed *Homaesthesis* with structural adaptations similar to those of *P. arenarius* (and common to many arenicolous arthropods). The two species share a number of secondarily derived characters, and may have a common distribution in the Monahans dune system, but the new species is taxonomically quite distinct from *arenarius*. In fact, it exhibits characters which might be interpreted as intermediate between *Homaesthesis* and *Prionus sensu stricto*. The inclusion of this new species and *arenarius* in *Homaesthesis* limits considerably the definition of the subgenus (see generic discussion below). For the present, *Homaesthesis* may be recognized by the opaque, nonstriolate poriferous areas on the male antennal segments, 12- to 14-segmented antennae in both sexes, and smaller overall size (average length usually less than 30 mm.).

Prionus (*Homaesthesis*) *spinipennis*, new species

Male: Form moderate-sized, robust, dorsal surface broadly convex, integument castaneous to piceous, thoracic sternites, coxae, femora, and head reddish-brown, antennal segments 3 to 12 lighter reddish-brown.

Head with antennae attaining apical one-third of elytra, 12-segmented, external processes of segments 3 to 11 broadly rounded or feebly truncated, apical segment elongate, flattened, rounded at tip; upper lobes of eyes separated on vertex by about one-third greatest width of head.

Pronotum with discal surface coarsely, irregularly punctate, margins strongly produced and reflexed, anterior tooth arcuate, acute, antemedian tooth acute, moderately produced, posterior angle strongly dentiform, feebly acute or right-angular in dorsal outline; metasternum

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finely, densely punctate, clothed with fine, moderately long pubescence; scutellum with sides angulated at middle, then tapered to apex, basal two-thirds coarsely, irregularly punctate.

Elytra feebly explanate apically, parallel-sided for most of length, discal surface coriaceous, coarsely, irregularly punctate, costae strongly elevated, apices rounded to suture, sutural angle produced into a narrow acute spine (Fig. 2).

Legs with outer angle of protibia subspiniform, tibial spurs long, thin, laminiform, metatibial spurs thickened, tarsi broad, flattened (Fig. 4), first metatarsal segment lacking spongy setal pads on ventral surface, pads greatly reduced on segments 2 and 3, ventral surface of segments densely punctate and pubescent with short, suberect setae, margins of segments 1 to 3 acute, dentiform.

Length (exclusive of mandibles): 19.5 - 32 mm.

Female: Form robust, coloration as in male.

Head with antennae nearly attaining basal one-half of elytra, 12-segmented, external processes of segments increasingly produced apically, apical segment simple.

Pronotum similar in dorsal outline to that of male, lateral teeth conspicuously produced; metasternum very finely punctate, glabrous.

Elytra with sides slightly expanded behind humeri, gradually tapered from middle to suture, sutural angle spinose.

Legs with tibial spurs slightly more pronounced than in male, tarsal spongy pads reduced or absent on all tarsi, tarsal segments similar in form and setation of those of male.

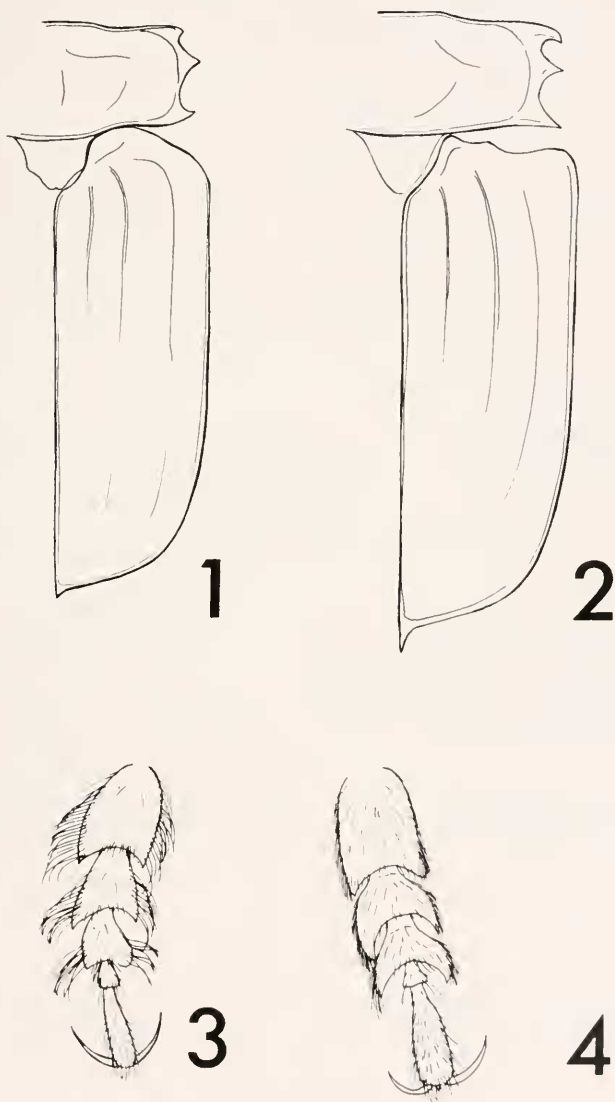
Length (exclusive of mandibles): 29 - 30 mm.

Type data: Holotype male, allotype (California Academy of Sciences) and 35 paratypes (34 ♂, 1 ♀) from: TEXAS, Ward County, Monahans Sandhills State Park, at lights, 21 August 1982 (R.H. Turnbow, T.P. Friedlander). Paratypes deposited in the following collections: Texas A&M University; University of California, Berkeley; U.S. National Museum of Natural History; Museum of Comparative Zoology, Harvard University; R.H. Turnbow, Jr.; F.T. Hovore; R.L. Penrose; M.E. Rice; and J.E. Wappes.

Diagnosis: *Prionus (H.) spinipennis* may be distinguished from all other known *Homaesthis* by the combination of 12-segmented antennae, expanded tarsi, dark-brown to piceous integument with wholly reddish antennae, and spinose sutural angle of the elytra (Figs. 1, 2). From *P. (H.) rhodocerus* Linsley, which it resembles in coloration and 12-segmented antennae, *spinipennis* may be further differentiated by the more elongate form, more narrowly placed upper eye lobes (separated by more than one-third greatest width of head in *rhodocerus*), larger antennae with more strongly developed external processes, and, in males, the much more densely pubescent metasternum. In the limited material available, females of *spinipennis* possess a thin, elevated line on the apical abdominal tergite, absent in female *rhodocerus*.

Of the known *Homaesthis*, *P. spinipennis* appears most closely related to *P. (H.) palparis* Say, from which it differs (in addition to the combination of characters enumerated above) by the more widely-spaced upper eye lobes (separated by only one-fourth greatest width of head in *palparis*). The strongly developed pronotal margins, form of the tarsi and antennae, and coloration would have placed *spinipennis* with *palparis* and *P. (H.) simplex* (Casey) in Casey's genus *Prionina* (synonymized with *Homaesthis* by Linsley, 1962).

At the Monahans locality, *spinipennis* and *arenarius* appear to be allochronically separated, the latter having been taken only in late May and early June; little, however, is known of their habits or life histories. Two of



Figures 1, 3: *Prionus arenarius* Hovore, male: 1, right dorsum, pronotum and elytron; 3, right metatarsus. Figs. 2, 4: *P. spinipennis* new species, male: 2, right dorsum, pronotum and elytron; 4, right metatarsus.

the paratypes of *P. spinipennis* were collected away from lights in association with shinnery oaks (*Quercus havardii* Rydb.) growing on the dunes.

Generic Discussion and Key to Species: The number of characters by which *Homaesthis* may be distinguished has been reduced by the inclusion of *arenarius* (possessing rounded apices on the third metatarsal segment) and *spinipennis* (possessing strongly produced and reflexed anterior pronotal angles). For the present, the 12 to 14-segmented antennae, with non-striolate poriferous areas will suffice to differentiate all known *Homaesthis* from other nearctic subgenera of *Prionus*.

Key to the Species of *Homaesthis* (adapted from Linsley, 1962)

- 1a Antennal processes distinctly emarginated and bilobed; color reddish-brown 2
- 1b Antennal processes at most truncated or very feebly emarginated, not bilobed; coloration variable, usually brownish or piceous 3
- 2a Antennae 12-segmented; pronotal disk glabrous; metatarsi broadly expanded, flattened, fimbriate with long hairs (Fig. 3) *arenarius* Hovore
- 2b Antennae 13- or 14-segmented; pronotal disk sparsely to densely pubescent; metatarsi narrow, elongate, without fringe of hairs *emarginatus* Say
- 3a Antennae 12-segmented 4
- 3b Antenna 13-segmented *integer* LeConte
- 4a Eyes separated on vertex by one-third or more the greatest width of head; coloration variable; antennal segments all or in part light reddish-brown 5
- 4b Eyes separated on vertex by one-fourth or less the greatest width of head; coloration piceous to black; antennae concolorous with body *palparis* Say
- 5a Coloration dark brown, castaneous, or piceous; antennae all or in part lighter reddish-brown 6
- 5b Coloration concolorous light reddish-brown, antennae not contrasting 7
- 6a Metatarsi expanded and flattened (Fig. 4); sutural angle of elytra distinctly spinose; male metasternum densely pubescent *spinipennis* Hovore and Turnbow
- 6b Metatarsi narrow, elongated; sutural angle of elytra acutely or obtusely dentiform, not spined; male metasternum thinly pubescent *rhodocerus* Linsley
- 7a Anterior pronotal angle distinct; sides of scutellum evenly rounded to apex; first metatarsal segment subtriangular in dorsal outline, less than twice as long as broad *simplex* (Say)
- 7b Anterior lateral pronotal angle irregularly rounded; sides of scutellum obtusely angulated at middle; first metatarsal segment slender, elongate, parallel-sided, three times as long as broad *linsleyi* Hovore

Corrigenda: Hovore (1981) incorrectly cited Monahans Sandhills State Park as located in "Webb County;" it is in Ward County, Texas.

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